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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/611,290	07/06/2000	Patrizio Vinciarelli	00614-092002	4908

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BOSTON, MA 02110

EXAMINER

DINH, TUAN T

ART UNIT	PAPER NUMBER
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2827

DATE MAILED: 03/19/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/611,290

Applicant(s)

VINCIARELLI ET AL.

Examiner

Tuan T Dinh

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 26-28 and 30-39 is/are pending in the application.
- 4a) Of the above claim(s) 26-28 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 30-39 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 September 2000 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 03/11/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

The request filed on December 22, 2003 Request for Continued Examination (RCE) under 37 CFR 1.114 based on parent Application No. 09/611,290 is acceptable and a RCE has been established. An action on the RCE follows.

Drawings

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "protective coating comprises a plurality of windows" claim 39, lines 2-3 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 39 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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Regarding claim 39, lines 1-3, it is confuse. Does applicant mean of “a plurality of conductive terminations and a plurality of windows” as the same or different of “a conductive termination”, and “a window” as set forth in claim 1, lines 2 and 5?

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 30-33 and 35-39 are rejected under 35 U.S.C. 102(b) as being anticipated by Juskey et al. (U. S. Patent 5,232,758).

Regarding claims 30 and 39, Juskey et al. discloses an apparatus (electronic device 10, 20) as shown in figures 1-2 comprising:

an electronic device (22), see column 4, lines 52-53, having an outer surface (the surface in which components 24 formed on) and a conductive termination (conductive traces 30), see column 4, line 55 (leads or pins of the components 24), on the outer surface;

a protective, conformal coating (26), see column 4, line 56), on the surface of the electronic device (22); and

a window (28), see column 4, line 64) formed in the protective coating (26) to expose a portion of the conductive termination (30 or the pins of the components 14),

wherein the exposed portion of the conductive termination (a portion in which is not covered by the coating) is recessed in the window of the conformal coating (see top view of figure 1 and side view of figures 2).

As to claims 31-32, Juskey et al. discloses the coating (16) in figure 1 comprises a uniform thickness, or uniform to the geometric configuration of the electronic device (figure 1 shows a triangular shaped of the conformal coating covering the electronic device 12).

As to claim 33, Juskey et al. discloses the coating comprised a polymer, see column 3, lines 64-66.

As to claims 35-37, Juskey et al. discloses the electronic device (14) in figure 1 comprises an integrated power device (IPD), a semiconductor, or a power semiconductor (column 4, lines 29-33).

As to claim 38, Juskey et al. discloses the window (18 or 28) in figures 1-2 restricts the region of the termination (30 or the pins of the components 14 or 24) to which solder can adhere, the exposed portion defining a location for solder bond (column 4, lines 35-38).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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7. Claim 34 is rejected under 35 U.S.C. 103(a) as being unpatentable over Juskey et al. ('758) in view of Sutrina (U. S. Patent 5,440,172).

Juskey et al. discloses all of the limitations of the claimed invention, except for the coating comprising a polymer, and the polymer comprises poly-para-xylylene.

Sutrina shows an apparatus in figures 1-3 comprising: a conformal coating made by xylylene polymer (column 3, lines 26-37, column 4, lines 45-49).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use a conformal coating such as xylylene polymer, as taught by Sutrina, employ in the apparatus of Juskey et al. in order to provide a thermal energy dissipating of apparatus.

Response to Arguments

8. Applicant's arguments with respect to claims 30-39 have been considered but are moot in view of the new ground(s) of rejection.

Applicant argues:

Vinciarelli does not meet the limitations of claim 30.

Examiner agrees that the Vinciarelli reference does not meet all the limitation of claim 30. However, by apply a new ground rejection, examiner shows that Juskey et al. discloses all of the limitation of claim 30 as explained in portion #5.

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Conclusion

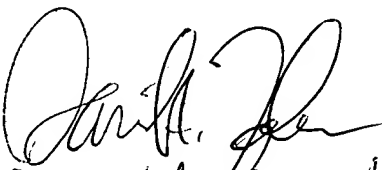
9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. McLaughlin et al., Guckel et al., Shaw et al., Tyburski, Dahringer et al. disclose related art.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tuan T Dinh whose telephone number is 571-272-1929. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kammie Cuneo can be reached on 571-272-1957. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tuan Dinh
March 10, 2004.


David A. Zarneke
Primary Examiner
3/12/04